AGS CNI Polarimeter

Measurement of Polarization and Other Parameters

- Open the following applications:

    1. StarOffice (Haixin Huang and others maintain a single spreadsheet file that contains all of their observations)

    2. AGS CNI DAQ (This application is located on a remote machine.   Typically it is left running on the Linux box at MCR 3)

    3. Pet/AGS/Polarized_protons/CNI_Target

    4. StartUp/start/AGS applications/AgsIPM

    5. StartUp/start/AGS applications/AgsACDipole

    6. StartUp/start/AGS applications/AGSRFDipoleControl

- *AGS RF Dipole application*: If any amplitudes need to be changed, do so now and remember to click the button labeled "send the waveforms to vertical/horizontal rf dipole"

- *CNI_Target Pet Page*: Send the "target" **command** in order to move the target into the beam path

- *AGS CNI DAQ application* (see attached Diagram): Confirm that the **Run Number** has automatically incremented since the last data run, then hit the **Start Run** button

- *AGS CNI DAQ application*: Once the total number of events exceeds 20 million, hit the **Stop Run** button

- *CNI_Target Pet Page*: Send the "Rotate Out" **command** to remove the target

- *AGS CNI DAQ application*: Click the **Analyze Latest Run** button. Once the analysis is complete, hit the **Plot** button. A

pop-up window will appear. Flip through the charts in this window until you see the page containing the polarization measurement, error and chi-squared

- Enter the following information into the StarOffice spreadsheet:

    1. Date and time

    2. Current user

    3. Name of target being used

    4. The CNI Run # from the "AGS CNI DAQ" application

    5. "AGS One Transfer" and "AGS Extraction" scaler values

    6. Polarization measurement, error and chi-squared

    7. Horizontal & Vertical Emittance from IPM application for AT0 + 1120, 1220, 1420 and 1620 milliseconds

    8. Coherence Amplitude and Delta from AgsACDipole application

    9. Comments related to any unique features of the beam at the time of measurement

AGS CNI DAQ application

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AGS CNI DAQ                                                    _ ☐ ✕
RunNumber:  [                10051]  Start Run   Stop Run    Current set   user4 ▭    exit

CNIPOL-DEBUG : Spill - 66 Events: 126635    Total:        7.701*10^6
CNIPOL-DEBUG : Spill + 67 Events: 107254    Total:        7.808*10^6
CNIPOL-DEBUG : Spill - 68 Events: 125850    Total:        7.934*10^6
CNIPOL-DEBUG : Spill + 69 Events: 72     Total:       7.934*10^6
CNIPOL-DEBUG : Spill - 70 Events: 56     Total:       7.934*10^6
CNIPOL-DEBUG : Spill + 71 Events: 50     Total:       7.934*10^6
CNIPOL-DEBUG : Spill - 72 Events: 48     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 73 Events: 37     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 74 Events: 48     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 75 Events: 29     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 76 Events: 32     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 77 Events: 34     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 78 Events: 49     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 79 Events: 50     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 80 Events: 44     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 81 Events: 49     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 82 Events: 35     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 83 Events: 39     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 84 Events: 31     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 85 Events: 43     Total:       7.935*10^6
CNIPOL-DEBUG : Spill - 86 Events: 32     Total:       7.935*10^6
CNIPOL-DEBUG : Spill + 87 Events: 44     Total:       7.935*10^6
CNIPOL-INFO : Finishing run 10050 at Mon Mar 15 00:39:24 2004

Target scan    Stop scan              Analyze Latest run   Plot   Expert   Option
                              Stopped
```